DOCUMENT RESUME

ED 178 534 SP 015 068

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TITLE	Teacher Education and Certification: State Actions in the South. Including... 1979 Legislative Developments. Recommendations for State Plans.
INSTITUTION	Southern Regional Education Board, Atlanta, Ga.
PUB DATE	79
NOTE	22p.
AVAILABLE FROM	Southern Regional Education Board, 130 Sixth Street, N.W., Atlanta, Georgia 30313 ($1.50)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Administrator Role; Competence; *Educational Improvement; Educational Responsibility; *Southern States; State Legislation; Student Teaching; *Teacher Certification; *Teacher Education; *Test Interpretation

ABSTRACT

A variety of approaches taken by five Southern states toward the improvement of teacher education programs are described. Particular attention is paid to the establishment of new standards for teacher certification. The use and misuse of testing devices in student teacher evaluation is discussed, and a case is made for the development of a comprehensive educational program involving school principals and other administrators in the preparation and evaluation processes. The state programs discussed are those of Georgia, Florida, North Carolina, South Carolina, and Louisiana. (IH)

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Teacher Education and Certification: State Actions in the South

Including . . .
1979 Legislative Developments
Recommendations for State Plans

SP015068

Southern Regional Education Board

Highlights

- Although recent declines in the performance of high school students on national college entrance tests can be attributed to a multitude of factors, states are pinning some of the blame and most of their hopes for cure on the elementary and secondary schools and the system that prepares and certifies school teachers and administrators.
- States throughout the country are considering changes in the teacher education/certification process, spurred by discouraging news, such as the report that over half the teachers in one school district failed to pass a basic competency test and that less than five percent of the teacher education graduates from some colleges are passing the certification examination.
- Teacher education/certification can be viewed as a "pipeline process," and if the goals of better teaching and better learning are to be achieved, then a number of improvements need to be made along that pipeline, not just the addition of an examination for prospective teachers at the end of the process.
- Comprehensive state plans to improve teacher education/certification need to be developed within a realistic time span. The most effective plans may:
  - + provide for screening of candidates for teacher education programs;
  - + produce a test of teacher competencies with cutoff scores that are understandable and acceptable to the layman;
  - + involve currently employed teachers and administrators in planning;
  - + enlist the cooperation of all segments of higher education, not just teacher education programs and statewide agencies;
  - + devise an evaluation system for student and intern teachers that is insulated from local pressures and that includes a well-trained team of evaluators;
  - + inform teacher education programs of the weaknesses identified by competency tests and student teacher evaluations, so that curricular modifications can be made;
  - + direct special attention to the adverse effects that teacher competency examination programs may have initially on black teacher candidates and provide beefed-up skills development programs;
  - + fund a supportive research program to judge how well the pipeline changes are working;
  - + improve salaries and working conditions for teachers to increase and reward quality;
  - + recognize the need for school principals to be trained in the evaluation of quality teaching.

Teacher Education and Certification: State Actions in the South

Including . . .
1979 Legislative Developments
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130 Sixth Street, N.W. • Atlanta, Georgia 30313 • 1979 • $1.50

SREB

Southern Regional Education Board

Foreword

One of higher education's major responsibilities is preparing teachers, counselors and administrators for the public schools. One-fifth of all bachelor's degrees and about half of all master's degrees awarded in the South each year come in the field of education.

State legislatures in the South are calling for improvements in the process that prepares and certifies teachers as one way to increase performance of elementary and secondary school pupils. Recently, the Southern Regional Education Board (SREB) called together persons involved in these proposed teacher education changes to discuss their efforts and commissioned this paper by Robert E. Stoltz, vice-chancellor for academic affairs of Western Carolina University. Dr. Stoltz, who has wide experience in the design of tests of teacher competency, is convinced that tests alone will not guarantee improved teaching, and in this report makes a number of suggestions for change throughout the teacher education/certification process.

Over the past 30 years, SREB has been concerned with a number of aspects of teacher education. SREB efforts have helped develop special curriculum for the teachers of exceptional children, design master of arts in teaching programs to help stem the teacher education shortage of the early 1960s, and estimate the teacher supply and demand outlook for the Seventies and Eighties. We hope this report will assist states in their efforts to improve the quality of teacher preparation and service.

Winfred L. Godwin
President

The Teacher Pipeline and Quality Control

"Pipeline process" and "quality control" are not everyday terms in the world of teacher education and certification. Since the 1950s, when organizational and budgeting models were borrowed from business and layered onto the public schools, professional educators have had an aversion to embracing the language of commerce to describe their activities. Nevertheless, pipeline and quality control may well be the most appropriate terms to describe the movement today to make sizable changes in that rather entrenched process called teacher certification.

The movement has a national base. One recent survey reported that changes in the teacher certification process are being considered or have already been established by legislatures and state departments of education in Arizona, Colorado, Florida, Georgia, Illinois, Kansas, Louisiana, Michigan, Mississippi, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Vermont, and Virginia. Add to this list the number of individual school districts that are implementing changes in the ways they select prospective teachers and/or their retention practices, and you have considerable evidence of a next-to-national phenomenon. But the movement is particularly visible, and well developed, among the SREB states. Alterations in the teacher education/certification process in five of these states are spotlighted here, not as preferred models of what others might do, but to illustrate the variety of approaches already taken.

Why Make Changes?

Why the sudden interest in the matter of teacher certification? What sparked it? To some degree these questions must be answered a bit differently for each state, but behind all lie some common antecedents. To get at the primary reasons, requires only the application of simple logic, triggered by some anecdotal evidence that defends that choice of logic, buttressed by some small-scale but timely research that adds its own special support and note of urgency. Quite simply, if test scores on nationally-normed college admissions tests are falling, as they have been, then is it reasonable to conclude that all of the blame should be borne by the students themselves, their families, or the fabric of society? Isn't it just as reasonable to believe that a share of the blame should rest with schools and teachers? And, when we get to teachers, isn't it possible that in this latter group there might be some who are weak or downright incompetent? If a state administers a competency test to all of its prospective high school graduates and finds that unacceptably large numbers are failing the test, isn't it quite possible that poor teaching might have been a contributor to that failure?

In response to court actions, some states conducted what seemed to be sensible, even if quick and rough, validity studies of the National Teachers Examination (NTE)—a widely used measure of what teachers should know about the functions of teaching, developed by the Educational Testing Services (ETS). As a direct consequence of one of these studies, the state is able to generate cutoff scores which, according to the professionals participating in the validating studies, should sort out those who are knowledgeable in their teaching discipline from those who are not. But the sad news is that if these cutoff scores are applied to candidates from earlier years or to current candidates, large numbers of teachers could not reach or pass the cutoff point. Even worse, very few individuals from some particular colleges would be able to pass. Two general conclusions are often drawn from this collection of data. First, that many of the teachers certified in the past were probably not very competent in terms of knowledge of their speciality. And second, that something might be wrong with those programs that are designed and advertised as being able to produce educated teachers who ought to be able to reach and pass these cutoff points.

This basic set of arguments gets further support from several pieces of test data available and given wide circulation. Take, for instance, the experience in Dallas. School officials there gave the Wesman Personnel Classification Test to 535 first-year teachers. Over one-half failed to pass a cutoff score selected by the district. Worse, officials estimated that the Dallas teachers scored lower than 894 state-certified teachers who took the test earlier but who were not employed. An additional report showed a group of administrators performed, on the average, even lower than the teachers. When the press gave wide publicity to the test results, Dallas officials said no official cutoff had been established and the data were being collected for several purposes. But, whether for research or for final decisions, the test score cat was out of the bag, and the scramble to explain or improve began in earnest.

As if the test scores, statistics, and everyday logic weren't enough, there are the situations that strike the public closest to home—direct exposure to a case of questionable teacher competency. In Louisiana, for example, an obvious spark had its origin in notes local teachers sent home to parents. The notes contained numerous grammatical errors. In one widely publicized case, there was not a single sentence that did not have a significant error in construction or grammar. In Mobile, Alabama, a teacher is reported to have written to a parent: "Scott want pass in his assignment at all, he had a poem and he fell to do it." Collectively, these incidents add support to the suspicion that has been growing in legislative halls — something is not right with teacher quality. The parents' view of the matter is usually clear and to the point. How can you expect my son or daughter to learn to write properly if the teacher cannot?

It would be easy, and comforting to some professional educators, to dismiss the whole furor over teacher certification as just another fad. But that would probably be wrong. There is a feature to these recent changes in the certification process that removes them from the fad category — namely, a strong direct or implied legislative endorsement accompanied by specific statutory requirements, frosted over with no small amount of quantitative and qualitative reporting requirements.

Adjustments Along the Training Pipeline

It would greatly oversimplify the current movement to describe it as solely related to the one-time act of teacher certification, even though much of the noise and hoopla has been focused on the event of certification. But, in the more complete and comprehensive approaches, much of the effort and some of the most revisionary attacks are being applied much earlier in time along the pipeline. The emerging logic says that to improve significantly the quality of the prospective teacher force, this work must begin at points along the pipeline, well in advance of the certification stage. To make this logic clear, let's take a quick look at the sequence of stages through which a prospective teacher must move before final certification and acceptance into the profession.

We need to begin with the youngster in high school who aspires to become a teacher. First, the student must be admitted to a college or university. At the more selective institutions, a certain amount of screening out takes place at this point. If, however, the student begins at a regional state university or at a local community college, relatively little initial screening occurs, due to the open-door admission policy of most of these institutions. During the first two years, the typical student takes mostly general education courses, with only modest specialization possible or encouraged.

At about the end of the sophomore year, the student must be accepted into the teacher education program. Acceptance usually means that the student has earned at least a "C" average on college work taken to that point. The rigor of the general education program will result in some screening out of the academically weaker prospective teachers prior to this point. One would expect that the professional teacher education courses, offered normally in the last two years of college, would further screen out prospective teachers, and they do, but to a much lesser degree than the lay person might think. A common observation of professionals, a perception which on most campuses can be supported by hard data, is that these professional sequence courses are often not heavily demanding intellectually, and that the grading practices of the programs are generous.

In the strong teacher education programs within the contemporary college, the principal screening step is probably the field experience that all prospective student teachers receive. This controlled and monitored student experience is often placed late in the educational program, primarily for cost

reasons. Here, depending on the care with which the teacher training institutions approach the problem of selecting the teachers and schools with which their students will work, and the emphasis they place on careful observation and contact by their faculty with the prospective teacher in the field, the first serious screening of the prospect as a teacher rather than as a college student occurs. Failure in this student teaching assignment usually means no college recommendation for certification. When the student has completed all of the work prescribed by the college and the school or department of education, he is granted a degree and recommended for certification by either the state department of education or by the college (the practice differs a bit from state to state, depending on which is granted the final certification responsibility).

Approved Program Certification: What Most States Have Now

This process, generally known as the approved program approach, is the one used, with local variations, by all of the SREB states. It gets its name because the college's professional educational program must meet with the approval of the state department of education. The approval process begins with the state department laying out certification requirements for the colleges to follow. Periodic checks by teams of educators formed by the state department of education attempt to insure that the college has followed the state requirements. If the college has done so, its program is approved and graduates of that program can be recommended for certification, with certification almost completely assured following graduation.

The requirements for approval have typically covered what subjects or courses would be required, what the qualifications of faculty teaching the courses should be, what instructional materials and facilities are needed, the library resources needed, and the like. An adaptation of this approach, but only an adaptation, has appeared in recent years in such states as North Carolina where the state department has issued extensive lists of competencies which teachers should have before being certified. Under this "competency certification" model the colleges are free to offer what courses they wish so long as they can demonstrate that, through the array of required course offerings and field experiences, the graduates are able to meet the required competencies. While intriguing and reasonable on the surface, the fact of the matter seems to be that, in practice, the competency approach still resembles very much the old approved program approach. Its impact on dramatically changing teaching education programs has been spotty and often fleeting.

The approach to the problem facing the states then becomes fairly straightforward, once you understand that there is a pipeline system through which a prospective teacher must flow before being stamped "certified." If the aim is to improve the teachers who are to be certified, then changes must occur somewhere along the pipeline. Obviously, there are several places along this four- or five-year-long process where this is possible. Furthermore, a change in one piece of the pipeline without change in another may mean no real change at the end.

Don't Just Add A Test

The pipeline logic is not yet fully developed in most state approaches and the most recent changes have centered on the certification stage itself. The most frequently seen alteration is the simple addition of a test requirement to the old approved program structure. Front and center comes the notion that if you add a test at the end of the process (an objective measurement of what every good teacher ought to know to do his work) wouldn't you be more likely to insure the quality of individual teachers *and* in the process make the teacher education institutions shape up? After all, if it is reasonable to test students to see if they should get a diploma, isn't it equally reasonable to test a teacher to make sure he knows what it is he is supposed to teach? The new hurdle usually requires that the prospective teacher take and pass a test prior to being eligible for certification. The test instruments proposed or used vary, reflecting the different histories of the states with test requirements and their particular concept of minimal skill requirements. Other states seem to understand that this test move alone, even if well developed and carefully administered, will not be sufficient to have the full effects they wish on the scale they want. Consequently, they are manipulating other segments of the pipeline, principally by inserting additional routing mechanisms, tighter and more objective quality controls of specific processes within the system (such as the student teaching period), and longer and much more carefully scrutinized probationary periods.

Teacher Surplus or Deficit: The States Call for Quality

In looking at the "whys" that spurred the movement, it is probably good to dispel two fairly common notions. Some argue that the effort to insert an additional tough test requirement in the certification process was to curtail the supply of new teachers further and, as a consequence, reduce the size of the teacher surplus that has been projected for the 1980s. While a teacher surplus may have helped encourage state departments and legislatures to raise standards for teacher certification, there is good evidence from one state that even a current teacher *deficit* has not stopped the state from moving to tighten up the pipeline.

The current anticipated teacher productivity of Georgia higher education institutions is about 3,000 new teachers for 1978-79, down from previous years. In recent years, Georgia has needed about 6,000 beginning teachers each year to fill annual vacancies. This year the legislature approved some 3,100 new teacher positions to strengthen or initiate new programs, largely in the lower grades. Georgia, with its historically low salary schedule for teachers, has for years been an importer of teachers. But even in the face of this deficit situation, now 9,000 spaces, and with only about 3,000 new teachers produced within the state, Georgia has maintained its competency test requirement for teacher certification. The only relaxation permitted to date is a provision for an interim period, when a candidate might be offered a one-year, non-renewable certificate. This is a temporary loosening only in that the prospective teacher still will have to pass the required test before being permitted to teach for a second year.

The judgment is that stronger certification requirements are not being designed to cope with the teacher surplus. In fact, the contrary may be the result of the new certification requirements. The gap between the number of teachers who can meet the new standards and the number of teaching positions requiring those skills may grow rapidly—certainly in the short term. The surplus may have helped the powers-that-be to move, and move now, but the movement was not designed to eliminate the surplus alone.

While some have argued that the rush toward more and tougher hurdles was designed to eliminate black teachers and to close black institutions, this does not seem to be a significant factor in the national movement. It is true that the data emerging from states where the new requirements are in place and operating show gloomy prospects for the black teacher aspirants and black institutions. In Louisiana, for example, only slightly more than half of the fall term graduates from all institutions who took the state's newly established teacher certification test passed. But at two of the predominantly black campuses, the percentage of graduates passing was below five percent. Even with this gloomy situation, once the goals and intent of the quality improvement effort have been made explicit, the move in most states has gained the support of substantial portions of the black population and leadership. To black parents, the damage to their children from exposure to a less than the best teacher possible may be more self-evident and critical than it may be to some white parents. In some states, special provisions already have been made in regulations to provide for and maintain the racial balance required and needed.

Data from one state suggests that black students at white colleges are more likely to succeed on tests such as the NTE than are black students at black colleges. Other data indicate that as the word of the "teacher surplus" spreads, it is the more able students who are leaving teacher education programs, not the less able. Still other studies are reporting that each year more teachers are leaving the profession earlier than ever before—a withdrawal behavior variously explained by "teacher burnout" and avoidance of growing disciplinary problems within the schools. Put it all together and this may mean that greatly increased efforts will be made to recruit and attract black students into improved teacher education programs—particularly at white campuses and necessarily at black campuses—if they are to fend off major enrollment drops. If salaries and working conditions do not improve, the major takers of jobs as teachers will increasingly be those who do not see themselves as having many attractive job options.

Approaches in Five SREB States

Now just what is it that the states have been doing to improve the quality of the process that educates and certifies teachers? A basis for understanding the dimensions of the situation can be established by looking at developments in five selected states. This quick look will not cover all situations or illustrate

all possibilities, but it will lay out some case histories that can be a guide to what is happening, or might happen, in other states.

Georgia

The Georgia legislature was ready in 1970 to initiate changes in the state teacher certification practices. The Georgia Department of Education, aware of this interest, requested time to develop a comprehensive plan to address the concerns identified by the legislature. Eighteen months later, a six-year plan had been prepared, presented to the legislature, and received legislative endorsement.

Basically, the Georgia plan retains the approved program concept, and, in approving collegiate programs, gives emphasis to the types of competencies that should be developed in prospective teachers. The certification approach, however, is described as a "performance-based" model because emphasis is given to the skills, achievement, and accomplishments of the teacher candidates as they can be measured by tests or judged and evaluated in field situations.

The eye catcher in the Georgia process is the requirement that a prospective teacher must pass a criterion-referenced test of the basic knowledge in the teaching field for which certification is sought. Criterion-referenced tests are tests of the material as it would be taught at the grade level being certified. The first tests were administered in October, 1978, and are scheduled to be offered four times a year at four or five centers across the state. The first time the tests were given, 81 percent of the persons taking the tests passed. Georgia officials estimate that it costs about $30,000 to develop a test for each of the 20 specific certification fields. In some certification areas where volume is small, tests may not be developed because of the high costs per candidate, but panels of experts may be convened to interview and review the performance of the teacher candidates.

Georgia also requires an on-the-job assessment of each candidate over a three-year period—essentially a long internship or probationary period with extensive evaluation. The State Department of Education contracted with the University of Georgia to develop a list of the basic, or generic, competencies which a good teacher should possess. After an extended review process, 18 basic competencies were identified for measurement during the internship period. After teacher candidates pass the criterion-referenced test, they are issued a non-renewable certificate, valid for three years, which permits them to enter the internship process. Special external evaluation centers have been established by the State Department. These centers, which are expected to be fully operational by fall, 1980, have the primary responsibility of seeing that each intern teacher is evaluated *twice* during each year of the internship. At each point, data will be provided from up to six sources: an external evaluator who is on the staff of the evaluation center; an administrator supervising the candidate in the school; a master teacher; student reports; a colleague; and possibly an administrator, named by the intern, other than the one currently supervising the intern. The external evaluator, master teacher, and administrator will all receive special training in using the evaluation procedures.

In the Georgia approach it is intended that in-service education will be provided the intern teacher and, in large part, will be directed toward weaknesses identified from the criterion-referenced test results or brought to light in the periodic evaluations. Successful completion of this process would then lead to certification.

There also are additional screens in the Georgia pipeline. While most Georgia institutions are essentially open door in their admissions process, some are not. Moreover, in Georgia there is a requirement in the public colleges and universities that each college student, regardless of major, must take and pass a test of writing and composition skill prior to entry into the junior year. The "rising junior" test helps insure that all students entering into the professional education sequence in the colleges have met at least a minimal skill requirement in English composition.

Florida

While no unified and comprehensive plan for modifying the teacher pipeline has been designated, the elements of a new process directed at individual pipeline points are emerging from specific actions taken by the state legislature. The first major change was approved by the legislature in 1978, with additional laws this year. As it now stands, Florida will retain a basic approved program model and a required

score at the 40th percentile on a nationally-normed college entrance examination as a minimal requirement (at the sophomore year) for students entering into a college-level teacher education program. However, the State Board of Education is permitted to waive this limit for up to 10 percent of the applicants. The percentage selected may allow for some discretion in acceptance on an institutional basis or it may be made mandatory on a systemwide basis. This latter modification was made when it became obvious that the 40th percentile alone would greatly curtail the number of minority students who would be eligible to enter the teacher education programs.

The State Department is charged with developing both general and specialized examinations which must be passed by graduation before a teacher can be certified. These tests must be ready by July 1, 1980. The tests are linked to the process by which college programs are approved by requiring that by July 1, 1982, a state-approved program must have 80 percent or more of its students making passing scores on the certification exams or the college will lose its approved program status. As of this date, the exact format and content of the examinations have not yet been established.

Statutes approved this year require the State Department to look at the possibility of competency tests in communications and mathematics to be given in the sophomore year of college. The plan calls for a student to pass these tests before entering into upper-division work, including the teacher education professional sequence. This proposed test appears to be markedly similar in concept to the Georgia "rising junior" examination.

The Florida approach also calls for a one-year, supervised internship. But from here the trail is hard to follow because no specific model for the internship is proposed. Rather, the State Department, in consultation with teacher education centers and colleges of education, was given until July 1, 1981, to explore several models and identify one or more for use. Limited funding is available for model development and evaluation, and there remain several unanswered questions about the intern models, such as who, if anyone, pays the student while on the internship.

When finally past all these hurdles, the teacher candidate would be granted a renewable certificate good for a period not to exceed five years. The language of the statutes is flexible but certainly strongly implies that, prior to renewal, a practicing teacher would be expected to demonstrate competency again. One slight loophole which opened this year permits the substitution of three years of "successful teaching" for the internship, but this is not so much an escape hatch as it is a necessary device for dealing in the short term with the sizable number of prospective teachers Florida attracts each year from other states who are still needed to fill Florida vacancies. The substitution is not available to Florida graduates.

North Carolina

The North Carolina approach is novel because it represents a quietly developed joint effort by the Board of Governors of the 16-campus University of North Carolina System *and* the State Board and State Department of Education. These two key groups adopted a joint resolution setting forth the outlines of a comprehensive plan to assure quality in the teacher production process. It did not arise out of a specific set of prior legislative requirements or special actions. The two agencies believe that only minimal special statutory requirements would be needed to carry out the plan. Independent as their action has been, there is evidence that, as they approached the problem, both the Board of Governors and the State Board were aware of growing legislative concern and interest in the matter, and felt their efforts to get their own act together would be viewed favorably in the state capital.

The joint approach seems to have grown out of the extensive Teacher Education Review Process (TERP) carried out by the Board of Governors in 1976-77. This was an indepth look into the quality and productivity of all teacher education programs (some 469) within the system. One of the first results of the study was the discontinuation of 85 teacher education programs. But another recommendation growing out of TERP, and perhaps the more far reaching, was for expanded and continuous communications with the State Department of Education on a number of issues of common interest. These discussions began quietly and informally, and high on the common interest list was teacher certification. From these low key discussions grew the broad plan which has now been accepted by both

the Board of Governors and the State Board of Education as a guideline for action. The plan is just that at this stage—a plan. Much remains to be done to flesh out the plan with specific activities and instruments and no precise timetable has been established for when the full plan goes operational. But the plan is of considerable interest since it does address the issue clearly as a pipeline problem, emphasizing needed activities at critical steps in the process if the full question of the ability to assure teacher quality is to be answered.

As now outlined, the plan calls for the following:

- Use of college entrance examination data as both a guidance tool and possibly as a loose screen at the earliest stage of entry into the collegiate program. New freshmen would be advised as to their chances for entering into the teacher sequence, completing it successfully, and their job prospects upon graduation.
- Review and examination of the general education programs of all the university system campuses to insure essential coverage and appropriate standards in basic skill areas.
- The development of a pre-teacher education screening procedure which would utilize tests to measure skills in communications and mathematics, along with other general education subjects. This is not designed to be a one-shot pass/fail procedure; individuals failing the screen will have the opportunity to review and try again.
- The approved program model in its general form would continue, but with more attention given to spelling out the competencies expected and more care given to insure that institutions are taking the appropriate steps so that their students achieve those competencies.
- A new cooperative approach to the student teaching experience. Special attention would be given to how student teaching sites are selected, supported, and utilized in concert with the colleges' instructional programs.
- The development of a criterion-referenced set of tests to serve as part of the final preservice evaluation of teacher education candidates. These tests are not necessarily thought of as replacing the NTE but would serve to supplement it. North Carolina tests will seek to determine if the prospective teacher has the knowledge to achieve the specific instructional program objectives for the grade levels in question.
- Initial certification for a fixed period of time, probably three years. During this probationary period, the candidate would be evaluated for both employment and continuing certification. The plan is not specific at this stage, however, it provides that a careful coupling of in-service training with the evaluation process be made in order to help the candidate when areas of weakness are identified. The repeated recognition of the role that can be played by the in-service education process would appear to be one of the strengths of the North Carolina plan.
- The plan concludes with a call for establishing a number of pilot centers throughout the state, beginning this next year, to help define and develop the specific elements called for in the overall model.

It is too early to say exactly what will emerge in North Carolina as a final process, but in terms of attempting to conceptualize the problem in its entirety and devise an attack plan on the critical points along the pipeline with a reasonable timetable, the planning is commendable.

Before leaving North Carolina it should be mentioned that in an independent action, growing out of an expert jury panel validation study of the NTE, there is afloat a proposal to establish new higher NTE minimum scores. These new higher minimums, set as a result of the validity study, would be reached over a four-year period. The new cutoffs will be appreciably above the old standards in most cases. The significance for some institutions can be readily appreciated, for if these new standards had been applied to the products of one institution over the last few years, over 95 percent of its graduates would have failed.

Louisiana

The State Superintendent of Public Instruction appears to have taken a strong lead in forming and establishing the new look in Louisiana teacher certification. Through his urging, a bill was introduced by a sizable number of legislators and passed in 1977. This bill gave the Superintendent the authority to select and administer a competency test to individuals seeking certification. The Superintendent was granted authority to set the minimum passing scores and to choose which test to use within some general guidelines. The test selected was the NTE. Cutoff scores were set about two standard errors below the minimums identified by an ETS validity study. Starting in the fall of 1978, teachers were to meet these standards to be certified.

Louisiana has also retained the old approved program approach as a part of the process augmented by a three-year provisional certification for teachers initially certified. Under an accompanying statute, all continuing teachers, principals, and administrators are to be evaluated at least once a year. During the initial three-year probationary period, the new teacher is scheduled to receive a careful evaluation before a continuing certificate would be granted. However, some reports from around the state indicated that the current procedure and practices for annual evaluation are unclear and cumbersome, and it is hard to say just how well this component is working.

Overall in the state only 53 percent of the 1978 fall graduates and 66 percent of the May graduates passed the new NTE cutoffs. Large numbers of black students from black institutions failed to achieve the required score on the test in its initial year. Among 211 May graduates, at the predominantly white institutions, 72 percent of the students at the public and 78 percent at the private institutions passed the test, whereas at the predominantly black institutions only 4 percent of the graduates at public institutions and 26 percent at private institutions passed the test. Modifications made in the statutes in 1979 provide that a local superintendent may be permitted to hire, for one year only, a prospective teacher who scored within 10 percent of the required test score. But at the end of the year, the teacher would have to pass the test at the minimum level. These emergency teaching permits may be issued only during a two-year transitional period ending in 1981.

While higher education may not have played a significant role in the formulation of the current requirements, public statements by education officials have indicated support for the major features of the new model certification process.

South Carolina

A few years ago the NTE passing score in South Carolina was raised to levels between 1,000 and 1,100, depending on the area of certification in question, with the result that about half of the South Carolina graduates taking the test failed to meet the required level. Worse, in the case of the graduates of some black colleges, this figure reached 100 percent failure. This situation spawned a rider on the 1978-79 appropriations bill in South Carolina. If the State Board of Education did not come up with a report during 1978 which would include the impact of NTE tests and particular score levels on the teacher supply and demand question, and possible alternatives to the NTE, the NTE passing score would return to 975. Under the 1978 requirement a joint House-Senate study committee was created to look into this matter, and a similar charge was given to the State Department of Education. The current product of this dual exploration is a bill before the 1979 South Carolina legislature which makes some strong and wide-ranging recommendations. The "looking into" process also has spawned some sharp exchanges between members of the Senate and the State Department, a rather uncommon public happening. As of mid-July, a bill has passed the Senate but is running into opposition in the House. The Senate proposal includes the following recommendations:

- Undergraduate students majoring in education must successfully complete a basic skills examination before being admitted into the teacher education program.
- A South Carolina teaching examination program will be developed to measure the "cognitive teaching area competencies desired for initial job assignment." These examinations shall contain a minimum number of common or general knowledge

questions. An existing examination may be used or South Carolina may develop its own, but the exam must be validated and ready for use no later than July 1, 1981.

- Procedures will be developed to evaluate a teacher during a provisional year of teaching. Training programs for insuring observer reliability will be developed. In addition, staff development programs will be developed for persons who teach on a provisional certificate.

- During the provisional year, each provisional teacher will be evaluated at least three times by a team consisting of a representative of the school district and an evaluation specialist employed by the Department of Education.

- After successful completion of the one-year provisional period, the teacher may be employed by a school district for the subsequent year during a one-year contract and again be evaluated at least two times during the year. Only after both the provisional and the full year under an annual contract shall a teacher receive a continuing contract.

One of the most interesting provisions of the Senate bill is that the responsibility for doing these things is *not* directly delegated to the State Superintendent or the State Department of Education but rather to a special Educator Improvement Task Force. This task force would prepare, validate, and administer the tests. The State Superintendent of Education would serve as an ex-officio, non-voting member and chairman of the task force, but a majority of the task force members would be appointed by the governor or would be chairmen of key Senate and House committees.

One factor which sparked the proposed changes is that a teacher in South Carolina can be given continuous employment rights after only about 65 days as a teacher. Consequently, the lengthening of the provisional and one-year contract period to a total of two years in an essentially probationary status represents quite a shift in the credentialing process.

Other SREB States

Across the South, other states are considering or already making moves to get on board the teacher certification change wagon. *Virginia* requires every teacher seeking initial certification after July 1, 1980, to take an examination selected by the State Board. In *Tennessee*, a subcommittee of the State Board has recommended that teacher training institutions determine by tests the competency of students choosing to enter teacher education programs, the ability to pass another basic teaching skills test of the graduation requirements, and develop a one- to three-year internship as a mandatory requirement prior to regular renewable certification. *Arkansas* has begun requiring all prospective candidates for certification to take the NTE, but as yet will not use the set minimum passing scores or cutoffs on the tests. The Arkansas approach can be viewed as primarily a data-gathering step now, a possible precursor to a validation effort later.

The list goes on, and patterns are changing rapidly. Teacher certification, which a few years ago could have been a front runner for the "least likely to move in any direction" award, is about to walk off with 1979's "faster than a speeding bullet" nomination. No one knows where it will stop and what the final configuration will be in the various states. Perhaps most important, there is time to shape the outcomes. The changes may be fast moving, but numerous options are available.

What Have We Learned?
What Are the Choices?
Where Should We Be Careful?

Some of the new twists proposed for teacher certification have their counterparts in industry and government, or have been tried in various locales on smaller scales. It is worthwhile to look at the new elements and their historical counterparts and see what observations can be made.

The plan should be comprehensive.

If the intent is to improve the overall quality of the teaching profession, then a comprehensive plan—not a piecemeal assault—is required. Raising scores on the NTE alone will probably not have sizable, enduring performance effects. So far, no state has such a plan operational, although some are closer than others. In Georgia, it remains primarily a state department and legislative effort with slight coordination with higher education. In North Carolina, the State Department of Education and the Governors of the University System have agreed to draw up a plan. It may need to find legislative support but, with this open, rather public, joint beginning, the prospects are good.

Any state plan must treat the teacher production effort as a process and not an event. For a given level of quality or quantity outcome, the point where final certification is granted may not be the most critical point in the pipeline. Until the state plan shows a clear understanding of the several connections between final outcomes and what needs to be done at the college entry point, or the entry point into the professional teaching education sequence, or in the design, operation, and evaluation of the student teaching experience, the state will probably end up disappointed in the results of its efforts.

Lead time is important.

Without adequate time to get ready, it is usually wasteful, frustrating, and confusing to shift too rapidly from one system to another. Also, a shift without adequate preparation tends to increase costs and the cost impact is felt sharply and heavily in one short period rather than spread more comfortably over time. A legislature would be wise to make clear its call for action, its desired results, and its stand on critical policy issues. Then it must be willing to give the appropriate operating agencies time—but not too much time—to generate an operational plan. Haste in some states has not been an aid to rational or complete development of a workable and reasonably efficient system. Legislative impatience with the speed that its signals were being read and reacted to has been the root cause of crash efforts later demanded of state agencies. There are ways for a legislature to show the need for action without it trying to do all the planning, or planning only partially.

Comprehensive programs will not be cheap.

A program that attempts to deal with the overall pipeline system will not be cheap. But there are ways to spread the costs over time and arrive at good, strong, and more carefully orchestrated and workable models. Planners can be asked for cost estimates of carrying out major modification under several alternative conditions. Then the gains or losses in time and effort and outcome can be weighed against the dollar cost annually or cumulatively over a reasonable time. Such an approach is not novel, but rare among educational proposals. Requiring it in connection with the teacher pipeline problem might lead to the wisest and most economical decision making on the part of the legislative policymakers.

Trained evaluators are a wise investment.

If the quality improvement effort involves the appraisal and evaluation of prospective teachers during an internship or probationary period, and it seems eminently reasonable that it should, then the rating forms must be carefully designed and the raters specially selected and trained for the task. The Georgia approach seems to recognize this and addresses it directly. Doing it well will not be inexpensive, but this cost should be laid against the potential cost to the child and society of not having this basic step in the teacher preparation process at all or doing it poorly.

Evaluation should be insulated from local pressures.

In designing the internship or probationary component where the prospective teacher is observed and evaluated in the field, much careful thought should go into just who should be on the evaluation team. It seems reasonable that one member might be a master teacher, from the school or district, who

has had ample opportunity to observe the candidate in school and classroom situations over an extended period of time. It also seems wise to include in the team at least one experienced and trained individual who is from outside the particular school system in which the internship took place, possibly representing the broad interest of the state.

It is no secret that hometown politics and local log rolling can enter into the hiring and retention of teachers. Sometimes this leads to acquiring good teachers and sometimes not. But the certification process—a process which carries its meaning across the entire state, and into other states—should be as free from local pressures and politics as possible. Each state will design its own process if it moves toward higher standards for teachers, but any state should want to define and reach its quality standard by processes that are as objective, unbiased, and neutral in outlook as humanly possible.

Test results should improve teacher preparation.

As was noted earlier, the types of tests the states are considering cover quite an array of brands and kinds—from the national norm-referenced to the homegrown criterion-referenced variety. Each can have its place in a well-conceived process leading from assessing initial interest and aptitudes in teaching to final certification and recertification. But if the student is to benefit from the act of being tested, then the tests, regardless of their form, should have more than just a little diagnostic slant. Put differently, after being tested at a critical stage, it should be possible for the student, the training institution, and the state all to know where the student did well and where the student did poorly. Feedback of scores from the tests in readily usable and understandable form can aid both the student and the preparing institution to review methods and allocations of time, and seek to improve procedures.

Developmental programs should be a part of the process.

When large numbers of students from particular educational institutions fail a test linked to some major outcome such as certification, some persons are quick to jump to the conclusion that the college alone is at fault and "has not taught the student anything." Remember, however, that some institutions by design, intent, or history will and do attract as beginning students individuals whose early elementary and high school preparation was very weak and whose home support system was frail. The colleges that receive most of these students often add a great deal to what the students know when they leave and help them expand greatly what they can do. In the standard four-year period, these students may not be at the level that others can reach more easily, but the institution must insist on a competitive standard of excellence at the point of graduation.

In addition, some of these presumably weaker students will have the attitudes and temperament, the patience and concern, required in many situations to make a truly effective teacher. To cut them off prematurely from a teaching career may be to deprive the state of some very good, potential teachers. As a consequence, any effort to improve overall quality by very tight screening at the front end should be coupled with strong skills developed programs to enable individuals initially screened out on achievement grounds to have an opportunity to develop the skills necessary to pass on to the next level. There is more to being a good teacher than intellectual problem-solving skills alone. Any good pipeline system must recognize this.

Teachers should be involved.

As states move to improve quality by adjusting the screens and treatments along the pipeline, they will need to enlist the support of many groups. Chief among these will be the teachers themselves, both current and prospective. One should except some opposition, although to date the organized opposition in the SREB states has not been particularly strong. Experience in those states which have moved further along the path of change in the certification process suggests that key ingredients of a successful developmental plan include:

- evidence of involvement for teachers in the design and operation of the plan;
- recognition that most present teachers are competent and dedicated;

- emphasis on the notion that as the pipeline is improved, one of the gains for all teachers will be strengthened education programs which will lead to broadened career opportunities.

It is too easy in publicizing the new approach to stress the screening out aspects of the new process and forget that a major positive outcome for all who move through the pipeline successfully is a richer array of career opportunities, both initially and over a lifetime.

Test scores must be understood by the public.

One of the most important and difficult tasks is that of determining what the cutting scores will be on the tests that are to be inserted into the process. The several situations where the Educational Testing Service has carried out validity studies of the NTE are excellent examples of the problem. In response to court actions, a need arose for states to carry out quickly validation studies of the NTE if the states wished to defend current or continued use of the tests.

The validation model used by ETS in North Carolina, South Carolina, and Louisiana, for example, is acceptable in theory, efficient in time, and has a defensible logic. As it has emerged in practice, however, it leaves much to be desired. Basically, it is a "jury" or "expert panel" model in which experienced teacher educators judge how well their students would do on the tests. From these judgments, it is possible to make estimates of the scores that might be made by hypothetical typical students who are competent in their specialized area. These scores are usually lowered by two or more standard errors of measurement.

When this process is completed, a problem arises. The results are difficult for many professionals to accept rationally and usually boggle the mind of the layman. To illustrate, reported data from Louisiana indicate that a person would have to rank in the top half of all national graduates in order to be certified to teach in Physical Education, while a person seeking certification to teach English would only have to score between the 10th and 25th national percentile ranks. From the statistician's viewpoint, this is a condition rationally arrived at and explicable—but from the public view hard to understand or accept. The long and short of it is that the setting of cutting scores is a serious and extremely important task. It requires good statisticians, carefully selected experts, and common sense to select a validation model and set up a final array of some score levels to make public. Great care should be taken in how it is done, who does it, and how the results will be reported and used. Cutting scores on statewide certification examinations not only has to be professionally done but publicly understandable and acceptable.

Give a "second chance" on the tests.

The effort to improve the process by inserting tests as screening or guiding devices along the way should always be accomplished by provision for prospective students or candidates to retake the examinations. No test is so good that a single performance on the test should direct a student unalterably down one route rather than another. Casual retaking of the examinations can be readily controlled by the price set for taking the examinations, by establishing required waiting periods before retaking, or similar policies alone or in combination.

Improve student teaching and internship experiences.

Great care should be taken in studying and evaluating alternative models around which to build student teaching and internships. Key ingredients of strong programs are:

- How the schools and classrooms to serve as field sites for student teaching or internships are selected—to get the best teachers you will want them to learn under the best teaching models, not the most convenient or expedient.
- How master teachers are identified, trained, and rewarded—good teachers, just as good surgeons or lawyers, should learn under a pro, but a pro who can teach a novice.

- How school administrators are trained for their roles in supervising teaching.
- How evaluation teams are composed and trained; how they report; and to whom they report. This means an independent process, free of politics, and one that backs up judgments with data.
- The process by which standards for successful completion of student teaching or internships are established. Extremely important here is the way in which these standards will be monitored to insure that they are reasonably equivalent across the state. The whole new structure could collapse rather quickly if it became obvious that certification in one locality was based on a notion of professionalism that was considerably lower than one used in another part of the state.
- The design of the in-service program that will accompany this period of structured field experience. Early evaluations should identify areas of need or weakness and the in-service education should be keyed to helping prospective teachers overcome these weaknesses.

What about "teaching the test"?

An argument frequently raised against moving in the direction of adding a test requirement to the teacher education process is that doing so will lead to a standardization of the curriculum. Opponents often raise the cry that with a test hurdle all colleges soon will be teaching only to the tests. This translates, they will argue, into all colleges teaching the same things. Their ability to be creative and emphasize philosophic differences will be lessened, and the freedom to assert individuality will be lost.

While interesting in theory, most of these concerns are not very soundly based on demonstrable practical events. The competency tests proposed in Georgia, for example, are designed to measure the prospective teacher's knowledge of skills and understandings as those skills are to be taught in the areas and for the grades for which the teacher is seeking certification. Defined this way, the tests are sufficiently minimal to permit the colleges to add considerably more to their teacher education programs and, if encouraged, they will. Teaching to the test could be a problem, but is easily avoidable and can be readily minimized. This threat should never be enough to cause one to back off.

The "teaching to the test" argument is rather commonly raised in educational circles but not nearly so much in other fields, such as law and medicine, where there has been longer experience with certifying or licensing examinations. Finally, some degree of teaching to the test is exactly what the planners have in mind, and what is probably needed. Keep in mind that the current situation is the result of some fairly clear evidence that communications and mathematics skills are not being demonstrated by the teacher candidates. If it takes a test for them to acquire these skills, then some teaching to it may be just what the doctor should order.

Where does higher education fit in?

Getting some pipeline improvements installed, much less getting them to work, will take positive involvement of key groups from the higher education sector within the state. Discussions with those close to the planning tables in the five sample states suggest they recognize this, but a look at the hard evidence of active working involvement on the part of higher education in the plans indicates that it is still spotty and, too often, superficial. The North Carolina approach appears strongest in this respect as it shows direct and equal partner involvement of public higher education from the outset. In the North Carolina model, there is a recognized reciprocity of roles among public higher education and the state department and the schools. The family of questions that begins "If we do this, will you do that?" seems to be getting considered, and, most important, answered.

Legislatures ought not to interpret the phrase "involvement of higher education" so narrowly as to cover just departments or schools of education. Much of the early work of all prospective teachers occurs in schools or colleges of arts and sciences, and many teachers will take a significant portion of their work in business, the technologies, home economics, and many other specialized areas. Consequently, the state plan should encourage presidents, chancellors, top-level academic vice-presidents, and deans to assist faculties outside the college of education to carry out their responsibilities in the process.

A teacher surplus poses enrollment and funding problems.

Enrollments in schools and departments of education have been dropping rather steadily, and in some cases sharply, for the last few years. The major cause would seem to be the great publicity given to the "teacher surplus." But, legislative leaders should be careful in handling the term "teacher surplus"—it's a slippery concept, as can be seen in Georgia. As mentioned earlier, Georgia has not been in a surplus condition for some years, if one defines the situation in terms of the gap between the number of local teachers produced and vacant positions. As noted, the net result of the 1979 actions was to go from a small deficit to one of major size within a matter of months.

The question of whether a state has or does not have a surplus may depend on the locality within the state or the teaching speciality. For instance, in several states where there is a general "teacher surplus," significant deficits of vocational teachers also exist, and have existed for several years. Job prospects in those specific teacher fields are very good, if one is willing to relocate to that state. If the teacher production pipeline is modified to further restrict in number or quantity those who enter the colleges and universities or, at a later point, restrict the numbers entering the professional education sequence, a further downturn of enrollments in schools and departments of education is very likely, certainly in the short run. But this is a short run that could last five years or more.

Since these colleges are run on enrollment-driven formulas, this enrollment slow-down will cause them to drop faculty teaching positions. Without some special protection, universities might be forced to drop new, younger, and in many cases, better education professors from their payrolls as the enrollment-based funding will not permit them the resources to retain these individuals. Existing tenure and seniority practices will usually mean "last in/first out" when the enrollment drops. Special funding provisions may need to be established to guard against this possibility or targeted support might be given to programs that encourage more healthy approaches to resolving the downturn problem. More attractive retirement options might enable a university to encourage selective retirements and, in the process, maintain their strongest cadre of education faculty.

Another approach emphasizing a specified period of special funding for education programs on a program rather than enrollment base might be instituted. This would seek to avoid precipitant losses and enable the institution through attrition over time to move to a more stable and stronger base. As a further complicating problem, it will be necessary to devote some additional resources and much administrative attention to the re-education and renewal of some existing education faculty who are not as much in touch with the demands of the contemporary school as is desirable.

Racial balance will present special difficulties.

The plan should address the question of how the states will maintain or improve racial balance within the pools of employed and practicing teachers. So far the test performance results in all states make clear that the imposition of new and higher standards will result initially in much greater numbers of black candidates failing to meet the new standards. Proposed interim solutions are waivers of score requirements, or permitting hiring discrepancies within certain set limits. These should be considered only temporary solutions as states move to reach an equitable racial mix in their credentialed teacher force.

Policies will have to speak to the upgrading and support of developmental education programs, special courses of study during pre-service or in-service periods at both the pre-professional and professional levels, and the like. The support given to the proposed certification changes in the SREB states by blacks is clearly built on the expectation that the changes will benefit their children, and benefit them reasonably soon. An initial price to pay will be a diminished number of black teachers certified. This is, within limits, apparently tolerable, but that cost cannot go on too long or we easily can expect a turnaround of that black support. In the long term, it is of considerable importance that the current wide gap between the performance of prospective black and white teachers be eliminated. Each year greater numbers of young blacks will enter into the middle class structure with increased and elevated options and should not and cannot be shut off from career options due to weaknesses which can be remedied.

Research can tell how it's working.

The plan must provide for a supportive research program. Without this, neither the program administrators nor the legislature will be able to tell if the new approach is working at all, where it is strong or weak, what its real costs are, what trade-offs have been involved that were not initially evident, and what needs to be done to monitor, fine-tune, and make the process more efficient. The research program should incorporate quality control checks; studies of student flow (who enters, moves through, or leaves the process at each critical stage), teacher production relative to supply and demand levels, and predictive connections among the several tests; and the assessments and evaluations at the various levels of the process. In sum, the research program must provide answers to such questions as: What difference has the new system made? Is it worth it? Can we get the same or better results for less cost? In the long term how will this shape the total educational system?

Will better rewards yield better teachers?

Changes in the pipeline by adding to or tightening the key filters along the process probably will not, in and of themselves, change drastically the quality of teachers produced. The history of other professions is clear on this point. While a more vigorous, demanding, and intellectually stimulating process will attract better students, it is the reward at the end of the process that will make the final goal sought, and the process tolerated, by the better students. Then they, in turn, will be the examples that encourage other students to work hard to meet the new standards. Until salaries are raised, working conditions improved, frustrations reduced, and societal recognition and respect moved upward, supplies of the new quality teacher will probably continue to be low. Or, following this spasm of quality consciousness, standards will dip to a point where the needed numbers are passed through the pipeline.

This situation presents the usual chicken and egg problem for the legislature and other public policy-makers. Do you raise rewards *before* quality improves to attract better people or do you wait *until* quality improves before the rewards are raised to recognize the actual quality gained? Past history suggests moving the two along in a planned and supportive way, but the first step will probably have to be getting the rewards up, even if this means, initially, rewarding some people whose quality is not quite what it should be. Early research that the legislature might request would be a market study to determine the critical elements in a teaching career which would have to be modified to attract better quality teachers and hold those present good teachers who, together and over time, would form a qualitatively stronger work force. This research must cover prospective teachers or those students in general who have the prerequisite skills and interests one would like to see applied to teaching. Surveys of only those teachers already in place might be of limited help. Marketplace research could provide the legislature with a better idea of the long-term cost implications of screening and renumerative alternatives and needed policy modifications, such as the attention devoted to reducing discipline problems within the schools—unquestionably a major factor in repelling prospective teachers and urging otherwise good ones out early.

The principal plays a key role.

Any administrator of educational institutions who has studied for any length of time the question of why some schools seem to be more effective or productive than others will have little trouble identifying the key role played by the top local-level administrator—the principal. Unless the principal is well-trained, skilled in managing resources, and able to function as an intellectual leader and curriculum implementer, then the collection of skills and talents within a school will not be pulled together in a way that brings the maximum benefit to the student. Unless a state addresses this problem with the same vigor and attention devoted to the certification of teachers, it is headed toward disappointment and will waste energy and funds.

The whole process of trying to get more quality into teachers will not work on behalf of students and society unless much more attention is paid to the crucial role of the school principal. None of the state plans developed so far are very clear on this point. Georgia is building competency tests for administrators but little is said in the approach about the performance evaluation of these individuals.

The North Carolina plan makes no specific reference to the issue—a point that has already been noted by participants in some of the public hearings in North Carolina on the plan. Florida has passed a bill calling for the establishment of a training program for administrators, but it is not clear how much of this training will be to develop a curriculum or academic manager versus a virtuoso of the cafeteria money or a manager of a motor pool and sports arena. What are the criteria against which a principal should be measured? How does the proposed course fit these needs? And what form does on-the-job evaluation take? Until there are good answers to these questions, it is not possible to know whether the program is a training program or a time filler.

Opportunities for Cooperative Action

The SREB states seem to be moving briskly, if unevenly, toward a still loosely defined common goal—the improvement of teacher quality. If they move totally independently of each other, they run the risk of rediscovering the wheel many times over, repeating mistakes needlessly, and spending much more for the development of a tool or service than would be required if the cost or experience were shared. In this situation, the states might wisely consider how cooperative undertakings might be developed to reduce end-product cost and lessen expenditures of time, funds, and talent. Carefully developed, much could occur in cooperative settings that would in no way infringe on the very legitimate demand that each state develop a unique and individualized pipeline that fits its own situation best. Some of the possible cooperative efforts include:

Create a regional exchange to share information on plans, progress and accomplishments.

An informal arrangement of representatives from each state could provide a swift, timely, and quite low-cost mechanism for learning from each other. Special reports or state-of-the-art papers might be generated to aid all who are involved in refashioning their state pipelines. Instead of rediscovering the wheel, each state might end up with a much rounder one.

Undertake multi-state effort to define key competencies and performance objectives.

Some states could build on work already begun in other states. Significant savings in time and cost, plus improved opportunity for checking the reliability and transferability of concepts, should be present in such a cooperative undertaking.

Jointly develop item pools or performance indicators.

Why should each state find that a sizable amount of money has been spent to develop an item bank for a particular competency that, when completed, looked just like the item bank of a neighboring state for a quite similarly defined competency? Cooperative building of item banks for commonly defined competencies does not mean each state will end up with the same test. For example, Alabama might get its unique test by selecting competency numbers 1 through 10, while Georgia prefers a test containing competency numbers 5 through 15.

Pursue cooperative research efforts.

All states will want to do studies of student flow through their pipelines. Use of common research models and data collection devices could greatly assist in the interpretation and use of each other's experience. Each year thousands of teachers, prospective and veteran, move back and forth across state lines. Studies of this mobility, and of the effect of certification processes on who moves where and which

state gets what, are needed now and will grow as each state moves in its own way to shore up its qualitative requirements.

The list of possibilities that are growing out of this shared interest in teacher quality is long. What is crystal clear today is that if this cooperative effort is to be pursued and used most fruitfully, it must begin now. In a short time it will be too late for the cooperative approach to be the powerful tool it is now.

The goal of the teacher pipeline has not changed in 50 years. Each year or so we have made adjustments in the dimensions of our goals—the numbers of teachers, the time to produce, the cost we are willing to pay, and the quality level we will accept at the end. The pipeline is changing again, this time ostensibly in the direction of higher quality output. Will the changes being designed in the legislative bodies and state departments of the South have that effect? It's too early to tell, but the changes proposed so far have a better chance of doing it than anything tried in the last 20 years. Will it go far enough? There is not yet evidence to be sure. It could be another flash in the pan. Whether it will do much or little depends on how serious the states are about recognizing and realizing that it is a pipeline problem with today's children as the raw material input and their children as the beneficiaries or victims of what is decided now. It is not a problem of one-test, one-time credentialing alone.